

## **Annalaura Averill-Murray**

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### EDUCATION

Masters in Science, December 1996  
University of Arizona, Tucson, AZ 85721  
Major: Wildlife & Fisheries Science

Bachelor of Arts, May 1989  
Bowdoin College, Brunswick, ME 04011  
Major: Biology

Amherst Regional High School, June 1985  
Amherst, MA 01002

### RELATED WORK EXPERIENCE

Fish and Wildlife Biologist  
US Fish and Wildlife Service, 1340 Financial Boulevard, Suite 234, Reno, NV 89502  
*February 2005 – present*

Responsibilities: Interagency consultations and coordination for groundwater development projects in southern and eastern Nevada- such as the Clark, Lincoln, and White Pine Counties Groundwater Development Project and the Kane Springs Valley Groundwater Project- as it relates to protection and minimization of impacts on Federally listed species and sensitive, aquatic species; Coyote Spring Valley groundwater and urban development issues as it relates to protection and minimization of impacts to threatened and endangered species; and Section 4 activities, such as critical habitat designation for a cismontane chaparral species of southern California.

Habitat Specialist  
Arizona Game and Fish Department, 555 N. Greasewood Dr., Tucson, AZ 85745  
*January 2003 – February 2005*

Responsibilities: Reviewed federal, state, county, and city projects, including NEPA documents and those related to Section 7 consultations; provided comment on impacts to Arizona's wildlife resources and options for mitigating and minimizing impacts; coordinated and facilitated inter-agency meetings; conducted site visits and consulted with private landowners regarding potential habitat improvement projects and funding opportunities under the Landowner Incentive Program; coordinated with NRCS on Wildlife Habitat Incentives Program projects; served on Interdisciplinary Teams for large-scale planning efforts, such as the USFS Pinaleno Ecosystem Restoration Project and BLM Ironwood Forest National Monument planning; surveyed for Threatened and Endangered species and state Species of Special Concern; coordinated with Pima County and Army Corps of Engineers on large-scale, multi-jurisdictional riparian enhancement projects; reviewed and wrote grant proposals; served as

regional coordinator for the Arizona Bird Conservation Initiative, including soliciting and evaluating grant proposals for bird and habitat conservation projects; participated in multi-agency and citizen group efforts to conserve open space in the Tucson Basin, including development of Interagency Agreements.

#### Nongame Biologist

Arizona Game and Fish Department, 555 N. Greasewood Dr., Tucson, AZ 85745

*January 2001 – December 2002*

Responsibilities: Managed contract projects, including desert tortoise surveys at Ironwood Forest National Monument (distance sampling) and a vertebrate inventory of the Gila Box Riparian National Conservation Area. Duties included avian surveys, cactus ferruginous pygmy-owl surveys, small mammal trapping, bat mist-netting, aquatic surveys, herpetofauna surveys, and radio tracking of tortoises; field trip coordination and organization; supervision of contract biologists, interns, and project volunteers; database setup and data analysis; technical report preparation; and oral/poster presentations. Also, co-authored Arizona's 2001 black-tailed prairie dog management plan and participated in Arizona's Black-tailed Prairie Dog Working Group; organized and participated in bi-annual Mt. Graham red squirrel midden surveys; managed large databases; led bird identification tours at birding festivals; organized Tucson winter raptor count; and participated in jaguar monitoring and conservation activities in the region, including remote-sensing camera monitoring, mapping potential jaguar habitat and conservation areas, and report preparation.

#### Nongame Birds Specialist

Arizona Game and Fish Department, 2221 W. Greenway Rd., Phoenix, AZ 85023

*October 1997 – December 2000*

Responsibilities: Managed field and volunteer effort for the Arizona Breeding Bird Atlas; contacted landowners regarding access to private properties; coordinated with military installments, the National Park Service, and the U.S. Forest Service regarding breeding bird surveys; conducted statewide surveys for breeding birds; conducted nocturnal surveys for owls and nightjars; managed large databases; responded to requests for information (Birds of North America accounts, U.S. Fish and Wildlife Service Status Assessment reports); wrote annual technical reports and prepared presentations on project status; wrote articles for Arizona Breeding Bird Atlas newsletters; hired and supervised field assistants; and participated on the 1999 Heritage Grant review committee.

#### Research Assistant

University of Arizona, School of Natural Resources, 325 Biological Sciences East, Tucson, AZ 85721

*February 1997 – October 1997*

Responsibilities: Designed and implemented cowbird control project in riparian area along Bill Williams River, AZ; conducted point-count surveys; established nest-searching plots; searched for and monitored nests of passerine species; built cowbird traps; trapped and removed cowbirds; banded cowbirds; analyzed data; prepared project proposal and annual report; prepared scientific presentation and manuscript; supervised field assistants.

Research Assistant

University of Arizona, School of Natural Resources, 325 Biological Sciences East, Tucson, AZ 85721  
*May 1996 – August 1996*

Responsibilities: Surveyed for bats at artificial and natural water holes in southwestern Arizona; recorded echolocation calls using time expansion ultrasonic detector coupled with a tape recorder; mist-netted bats; measured and determined reproductive status of captured bats; surveyed for insects with Malaise traps.

Graduate Research Assistant

University of Arizona, School of Natural Resources, 325 Biological Sciences East, Tucson, AZ 85721  
*Major Advisor: Dr. Michael Morrison.*  
*January 1994 – May 1996 (following 3 projects)*

*Neotropical Migrant Songbird Monitoring Program, Lower Colorado River Valley*

Responsibilities: Prepared project proposal and vegetation survey protocol; established point-count survey routes; conducted bird and vegetation surveys; analyzed data and prepared final report with management recommendations; managed project budgets; hired and supervised field assistants.

*Cowbird Parasitism of Neotropical Migrant Songbirds, Lower Colorado River Valley*

Responsibilities: Thesis work for Masters in Science. Established baseline parasitism rates and nest success of migrant songbirds breeding on the lower Colorado River prior to a cowbird removal project; investigated nest site selection for Arizona Bell's vireos and yellow-breasted chats and differences in nest sites that were and were not parasitized by brown-headed cowbirds. Prepared project proposal and protocols for vegetation measurements at nests and random sites; established nest-searching plots; searched for and monitored nests of four passerine species; analyzed data and prepared final report with management recommendations; prepared scientific presentations and manuscript; managed project budgets; hired and supervised field assistants.

Thesis Title: Brown-headed Cowbird Parasitism of Neotropical Migrant Songbirds Breeding in Riparian Areas along the Lower Colorado River

*Vermilion Flycatcher Nesting Biology, Bill Williams River, Arizona*

Responsibilities: Searched for and monitored nests of Vermilion Flycatchers; developed protocol for measuring nest-site characteristics; analyzed data and prepared manuscript.

Research Intern

Archbold Biological Station, P.O. Box 2057, Lake Placid, FL 33862  
*February 1993 – July 1993*

Responsibilities: Searched for and monitored nests of suburban Florida Scrub Jays; measured and banded nestlings; developed independent project; quantified habitat use, foraging patterns, levels of intra and interspecific competition using timed focal watches of individually marked birds; determined territory size by using play-back tapes to elicit aggressive responses between neighboring jays; prepared final report and presentation.

#### Intern

Student Conservation Association, 689 River Road, P.O. Box 550, Charlestown, NH 03603  
*September 1992 – December 1992*

Responsibilities: Surveyed Aleutian Canada Geese on their wintering grounds in the Sacramento Valley, CA; identified individually marked birds; sampled vegetation at foraging and non-use sites.

#### Research Assistant

Bowdoin Scientific Station, Biology Department, Bowdoin College, Brunswick, ME 04011  
*May 1989 – August 1989*

Responsibilities: Searched for and monitored nests of Leach's Storm Petrels; measured and banded nestlings; mist-netted and banded adults; prepared final presentation; collected and identified plant and mushroom species for herbarium.

#### OTHER EXPERIENCE

##### Counselor

Youth Homes, Incorporated, 1543 Sunnyvale Avenue, Walnut Creek, CA 94596  
*March 1991 – September 1992*

Responsibilities: Provided crisis intervention and support for a short-term assessment program for children between the ages of 12 and 17 that were removed from their homes by DSS Child Protective Services; arranged proper medical and dental care; supervised daily and special activities; supervised and trained shelter volunteers.

##### Counselor

Mt. St. Joseph-St. Elizabeth Treatment Center, 100 Masonic Avenue, San Francisco, CA 94118  
*January 1990 – August 1991*

Responsibilities: Taught independent living skills and tutored pregnant adolescent girls and teenage mothers; taught and reinforced parenting skills; facilitated weekly support groups; provided one-on-one counseling.

#### VOLUNTEER EXPERIENCE

Recording Secretary, Arizona chapter of The Wildlife Society, 2004.

Board Member, Arizona chapter of The Wildlife Society, 2002-2003.

Winter grassland sparrow study, Audubon Research Ranch, Arizona, March 2003.

Arizona Breeding Bird Atlas species accounts, author, 2002-2003.

Desert tortoise foraging ecology study, Smithsonian, various days, 2002-2004.

Radio telemetry field trip leader, UA Herpetology class, March 2002.

Sonoran desert tortoise surveys, Saguaro National Park, various days, 2000-2001.

Area Leader, Christmas Bird Counts in Phoenix and Tucson area, December 1998-2003.

Kanab ambersnail surveys, Arizona Game & Fish Dept, Fall 2000.

Bird Bander, Hassayampa River Preserve, Fall 1999.

Sonoran desert tortoise project, Arizona Game & Fish Dept, various days, 1997-1999.

Black-footed ferret surveys, Arizona Game & Fish Dept, Fall 1998.

## AWARDS

Star Award, U.S. Fish and Wildlife Service (2006)  
Certificate of Achievement, Arizona Game and Fish Department (2001)  
Commendation of Excellence, Arizona Game and Fish Department (2000)

## TRAINING

ArcGIS Module I training, BLM Nevada State Office, Reno, NV, March 2006  
Interagency Consultation for Endangered Species, Shepherdstown, WV, August 2005.  
Arthur Carhart National Wilderness Training Center Workshop, Tucson, AZ, December 2004  
Arizona Native Fish Identification and Management, Fossil Creek, AZ, October 2004  
C.L.E.'s Arizona Water Law Workshop, Phoenix, AZ, August 2004.  
Introduction to Hydrogeomorphic Processes, Flagstaff, AZ, March 2004.  
Shipley workshop on Reviewing NEPA Documents, Phoenix, AZ, May 2003.  
Chiricahua Leopard Frog Workshop, Sierra Vista, AZ, April 2003.  
Desert Restoration Workshop, Desert Manager's Group, Palm Springs, CA, March 2003.  
USFWS Endangered Species Act Workshop- Section 10, Phoenix, AZ, March 2002.  
Bat Conservation International's Bat Workshop, Portal, AZ, June 2001.  
Bureau of Land Management's Mine Safety Training, Tucson, AZ, March 2001.  
Streamlining Section 7 Consultations under the ESA Workshop, Phoenix, AZ, March 2001.  
C.L.E.'s Endangered Species Act Workshop, Phoenix, AZ, 1999.

## REPORTS AND PUBLICATIONS

Hatten, J.R., A. Averill-Murray, and W.E. Van Pelt. 2005. A Spatial Model of Potential Jaguar Habitat in Arizona. *Journal of Wildlife Management* 69(3):1024-1033.  
Averill-Murray, R.C., and A. Averill-Murray. 2005. Regional-scale Estimation of Density and Habitat Use of the Desert Tortoise (*Gopherus agassizii*) in Arizona. *Journal of Herpetology* 39(1):65-72.  
Snow, T.K., A. Averill-Murray, and C.L. Blasch. 2004. Vertebrate Inventory of the Gila Box Riparian National Conservation Area. Nongame and Endangered Wildlife Program Technical Report #230, Arizona Game and Fish Department, Phoenix, AZ.  
Lynn, S., A. Averill-Murray, and M.L. Morrison. 2003. Bell's Vireos and Yellow-breasted Chats in Remnant Cottonwood/Willow Vegetation of the Lower Colorado River Valley *in* Faber, P.M. (ed). 2003. California Riparian Systems: Processes and Floodplains Management, Ecology, and Restoration. 2001. Riparian Habitat and Floodplains Conference Proceedings, Riparian Habitat Joint Venture, Sacramento, CA.  
Hatten, J., A. Averill-Murray, and W. Van Pelt. 2003. Characterizing and Mapping Potential Jaguar Habitat in Arizona. Nongame and Endangered Wildlife Program Technical Report #203, Arizona Game and Fish Department, Phoenix, AZ.  
Averill-Murray, A. and R.C. Averill-Murray. 2002. Distribution and density of desert tortoises at Ironwood Forest National Monument, with notes on other vertebrates. Nongame and Endangered Wildlife Program Technical Report #193, Arizona Game and Fish Department, Phoenix, AZ.  
Van Pelt, W., A. Averill-Murray, and T.K. Snow. 2001. Draft Interagency Management Plan for Black-tailed Prairie Dogs in Arizona. Arizona Game and Fish Department, Phoenix, AZ.  
Morrison, M.L. and A. Averill-Murray. 2002. Evaluating the Efficacy of Manipulating Cowbird Parasitism on Host Nesting Success. *The Southwestern Naturalist* 47(2): 236-243.

- Averill-Murray, A., S. Lynn, and M.L. Morrison. 1999. Cowbird Parasitism of Arizona Bell's Vireos (*Vireo bellii arizonae*) in a Desert Riparian Landscape: Implications for Cowbird Management and Riparian Restoration. *Studies in Avian Biology* 18: 109-120.
- Averill-Murray, A., T.E. Corman, and C.J. Wise. 1997, 1998, & 1999. Arizona Breeding Bird Atlas Project Annual Progress Reports. Nongame and Endangered Wildlife Program Technical Reports, Arizona Game and Fish Department, Phoenix, AZ.
- Averill-Murray, A. and M.L. Morrison. 1998. Lower Colorado River Valley Cowbird Control Project. Report to U.S. Fish and Wildlife Service.
- Lynn, S., A. Averill, and M.L. Morrison. 1996. Neotropical Migratory Bird Monitoring Project in the Lower Colorado River Valley. Report to U.S. Fish and Wildlife Service.

#### PRESENTATIONS

- 13 May 2004. A GIS-based model of potential jaguar habitat in Arizona. Contributed presentation (poster). Biodiversity and Management of the Madrean Archipelago II, Tucson, AZ.
- 6 April 2002. Distribution and density of desert tortoises at Ironwood Forest National Monument. Contributed presentation (poster). Current Research on the Herpetofauna of the Sonoran Desert II, Tucson, AZ.
- 8 February 2002. Distribution and density of desert tortoises at Ironwood Forest National Monument. Contributed presentation (oral). Arizona-New Mexico Chapter of The Wildlife Society.
- 3 November 2001. Hibernation and aestivation in Sonoran Desert animals. Invited lecture, Mason Audubon Center, Tucson, AZ.
- 25 October 1999. Sonoran Desert birds: Life history traits and adaptations to life in a desert environment. Invited lecture, Desert Botanical Gardens, Phoenix, AZ.
- 5 February 1999 & 2000. Arizona Breeding Bird Atlas: Valuable data for the new millenium. Contributed presentation (poster), Arizona-New Mexico Chapter of The Wildlife Society.
- 7 February 1998. Nest-site characteristics of common bird species breeding in Arizona: Information collected for the Arizona Breeding Bird Atlas project. Contributed presentation (oral), Arizona-New Mexico Chapter of The Wildlife Society.
- 25 October 1997. Cowbird parasitism of Bell's Vireos and Yellow-breasted Chats in a desert riparian landscape: Implications for cowbird management and riparian restoration. Contributed presentation (oral), Conference on the Research and Management of the Brown-headed Cowbird in Western and Eastern Landscapes, CA Partners in Flight.
- 30 March 1996. Cowbird parasitism in the lower Colorado River valley: Are southwestern riparian areas ecological traps for breeding Neotropical migrants? Contributed presentation (oral), Cooper Ornithological society.
- 10 February 1995. Variables influencing cowbird parasitism and reproductive success of the Arizona Bell's vireo in the lower Colorado River valley. Contributed presentation (oral), Arizona-New Mexico Chapter of The Wildlife Society.

